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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105074 Amendment 3

DATE: August 15, 2007

SUBJECT: Review of Analytical Data, **Tier 2**

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Omega Chem OU2
Site Account No.:	09 BC LA02
CERCLIS ID No.:	CAD042245001
Case No.:	Not Provided
SDG No.:	IPL1281
Laboratory:	Test America Analytical Testing Corp.
Analysis:	1,2,3-Trichloropropane (1,2,3-TCP) and n-Nitrosodimethylamine (NDMA)
Samples:	4 Water Samples (see Case Summary)
Collection Date:	December 12, 2006
Reviewer:	Santiago Lee, ESAT/Laboratory Data Consultants (LDC)

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

SAMPLING ISSUES: [ ] Yes [X] No

Data Validation Report – **Tier 2**

Case No.: Not Provided
SDG No.: IPL1281
Site: Omega Chem OU2
Laboratory: Test America Analytical Testing Corp.
Reviewer: Santiago Lee, ESAT/LDC
Date: August 15, 2007

I. CASE SUMMARY

Sample Information

Samples:	OC2-GW22-W-0-271, OC2-GW22-W-2-272, OC2-GW01-W-5-273, and OC2-GW11-W-0-274
Concentration and Matrix:	Low Concentration Water
Analysis:	1,2,3-TCP (GC/MS) and NDMA (GC/MS/MS CI)
SOW:	EPA Methods 524.2 and 1625 Modified
Collection Date:	December 12, 2006
Sample Receipt Date:	December 12, 2006
Extraction Date:	November 12 and 16, 2006
Analysis Date:	November 14, 15, and 17, 2006

Field QC

Field Blanks (FB):	OC2-GW22-W-2-272 (1,2,3-TCP only)
Trip Blanks (TB):	Not Provided
Equipment Blanks (EB):	Not Provided
Background Samples (BG):	Not Provided
Field Duplicates (D1):	Not Provided

Laboratory QC

Method Blanks & Associated Samples:

6L16061-BLK1:	(NDMA) OC2-GW22-W-0-271, OC2-GW01-W-5-273, OC2-GW01-W-5-273-MS, and OC2-GW01-W-5-273-MSD
6L17038-BLK1:	(NDMA) OC2-GW11-W-0-274
C6K1602-BLK1:	(1,2,3-TCP) All samples, OC2-GW01-W-5-273-MS, and OC2-GW01-W-5-273-MSD

Tables

1B:	Data Qualifier Definitions for Organic Data Review

Sampling Issues

None.

Additional Comments

As directed by the TOM, a Tier 2 validation (i.e., Forms review all QC results and calibrations, minus calculation check) was performed. A Table 1A is not requested.

For the NDMA analysis, decafluorotriphenylphosphine (DFTPP) was not analyzed. Since NDMA is analyzed by the chemical ionization (CI) technique, no adverse effect is expected.

For the 1,2,3-TCP analysis, 4-bromofluorobenzene (BFB) was not analyzed. Since 1,2,3-TCP is analyzed by the selected ion monitoring (SIM) technique, no adverse effect is expected.

This report was prepared in accordance with the following documents:

- ESAT Region 9 Standard Operating Procedure 901, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Volatile and Semivolatile Data Packages*;
- EPA Method 524.2, *Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry*, Revision 4.1, 1995;
- EPA Method 1625C, *Semivolatile Organic Compounds by Isotope dilution GC/MS*, June 1989; and
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Holding Time/Preservation	Yes	
2.	GC/MS and GC Performance	Yes	
3.	Initial Calibration	Yes	
4.	Continuing Calibration	Yes	
5.	Laboratory Blanks	Yes	
6.	Field Blanks	Yes	
7.	Surrogate (Method 524.2)	No	B
8.	Labeled Compound (Method 1625)	No	C
9.	Matrix Spike/Matrix Spike Duplicates	Yes	
10.	Laboratory Control Samples/Duplicates	Yes	
11.	Internal Standard	Yes	
12.	Compound Identification	Yes	
13.	Compound Quantitation	No	A
14.	System Performance	Yes	
15.	Field Duplicate Sample Analysis	N/A	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The laboratory reported the NDMA sample reporting limit as 0.0020 ug/L. No NDMA was detected above this reporting limit. However, the area for the low standard of initial calibration is only 1230 (see attached quantitation report, p. 21 in data package). In the reviewer's professional judgment, the sample reporting limit should be raised to 0.01 ug/L; non-detected sample results should be reported as 0.01U.

B. For 1,2,3-TCP analysis, the laboratory did not spike the samples, QC samples, and method blank with a surrogate (see Method 524.2 Sections 3.2, 7.5, 11.1.2, and 12.1.1 and Table 1). Consequently, the extraction efficiency (surrogate recovery) cannot be evaluated. The 1,2,3-trichloropropane-d5 spiked by the laboratory was used as an internal standard.

C. For NDMA analysis, the laboratory did not spike the samples, QC samples, and method blank with a labeled compound (i.e., surrogate; see Method 1625C Sections 6.8, 10.2.1.3, and 10.2.3.2 and Figure 4). Consequently, the extraction efficiency (surrogate recovery) cannot be evaluated. The NDMA-d6 spiked by the laboratory was used as an internal standard.

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\06DEC02\NNA001.D Vial: 2
Acq On : 2 Dec 2006 7:43 am Operator: DF/AI
Sample : 1 PPB Std.# 6060243 Inst : gcms37
Misc : n-Nitrosamines Water ICAL 11/29/06 Multiplr: 1.00
MS Integration Params: RTEINT2.P
Quant Time: Dec 02 11:29:22 2006 Quant Results File: C6L02NWA.RES

Quant Method : C:\MSDCHEM\1\METHODS\C6L02NWA.M (RTE Integrator)
Title : Nitrosamine Water ICAL 12/02/06, Preextraction IS
Last Update : Sat Dec 02 11:29:05 2006
Response via : Initial Calibration
DataAcq Meth : C6K30NWA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) NDMA-D6	10.99	81	3995	10.00	PPB	0.00
4) NDPA-D14	15.89	145	2819	10.00	PPB	0.00
Target Compounds						Qvalue
2) NDMA	10.93	92	1230	1.09	PPB	98
3) NDEA	13.40	120	625	0.88	PPB	98
5) NDPA	15.85	148	398	1.09	PPB	74
6) NPYR	17.28	118	399	1.07	PPB	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
NNA001.D C6L02NWA.M Sat Dec 02 11:29:22 2006 Page 1

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR ORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared according to the document, "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review," October 1999.

U The analyte was analyzed for but was not detected above the reported sample quantitation limit.

L Indicates results which fall below the Contract Required Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.